Factor Analysis of Marketing Management among Summer Crop Farmers

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(Received 14 December, 2014, Accepted 06 January, 2015)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: The purpose of this research was identifying affecting factors on marketing management among summer crop farmers Ahwaz Township, Iran. The research method was descriptive and correlative. Summer crop farmers of Ahwaz Township considered as statistical population. The sample size was 300 people. After designing and validating the questionnaire, the questionnaire was pre-tested among 30 people and Cronbach alpha 0.86 was determined. The main tool was a questionnaire. In this study, after the collection and classification of data, data analysis and according to the type of research in two stages using descriptive statistics and inferential statistics were taken. To ensure, 310 questionnaires were distributed. The return rate was 97% (n = 301). All data processing and statistical analysis was performed using the software SPSS 19. For analysis data, correlative coefficients and factor analysis were used.

Based on the results of factor analysis the factors were categorized into seven main components, which have been named supportive factor, infrastructure factor, technical factor, economical factor, information and communication factor, extension and educational factor and participational factor. The obtained results from the factor analysis revealed that the seven mentioned factors explained 70.372% of the variation of affecting factors on marketing management.

Keywords: Marketing management, Factor Analysis, Summer crop farmers.

INTRODUCTION

Marketing management is a business discipline which focuses on the practical application of marketing techniques and the management of a firm's marketing resources and activities (Mohan, 2005). Traditionally, a "market" was a physical place where buyers and sellers gathered to exchange goods. Now marketers view the sellers as the industry and the buyers as the market (Fig. 1). The sellers send goods and services and communications (ads, direct mail, e-mail messages) to the market; in return they receive money and information (attitudes, sales data) (Kotler, 2002).
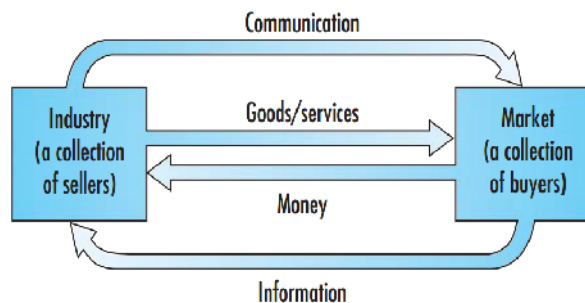

Fig. 1. A Simple Marketing System (Kotler, 2002).

The marketing management process consists of four stages (Kotler, 2004): market research, marketing strategy, planning and implementation, control and evaluation. Marketing research is the systematic and objective search for, and analysis of, information relevant to the identification and solution of any problem in the field of marketing. Marketing strategy is the goal of increasing sales and achieving a sustainable competitive advantage. The market planning process typically results in a marketing strategy that can be used to enhance sales for the business producing it. Implementation, evaluation and control are like the three legs of a stool; remove one, and the stool wobbles and crashes to the ground. If you remove one of these items from a marketing plan, it falls apart, and the plan won't succeed. All three are necessary for the successful completion of marketing activities that help businesses achieve their strategic goals. Kohli and Jaworski (1990) focused on three core themes that are underlying the definition of market orientation: (1) customer focus, (2) coordinated marketing, and (3) profitability. They then conducted interviews with 62 managers in both marketing and non-marketing positions in the US and concluded that profitability is a consequence of market orientation, and not a component of it.

They finally defined market orientation as follows: Market orientation is the organization-wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organization-wide action, or responsiveness to it. Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. Numerous interconnected activities are involved in doing this, such as planning production, growing and harvesting, grading, packing, transport, storage, agro- and food processing, distribution, advertising and sale (Vadivelu and Kiran, 2013).

Agricultural marketing can be defined as the commercial functions involved in transferring agricultural products consisting of farm, horticultural and other allied products from producer to consumer. Agricultural marketing also reflect another dimension from supply of produce from rural to rural and rural to urban and from rural to industrial consumers (Vadivelu and Kiran, 2013).

The purpose of this research was identifying affecting factors on marketing management among summer crop farmers Ahwaz Township, Iran.

MATERIAL AND METHOD

This is an applied study and the research method was descriptive correlative. Summer crop farmers of Ahwaz Township considered as statistical population. The sample size was 300 people. After designing and validating the questionnaire, the questionnaire was pre-tested among 30 people and Cronbach alpha 0.86 was determined. The main tool was a questionnaire. In this study, after the collection and classification of data, data analysis and according to the type of research in two stages using descriptive statistics and inferential statistics were taken. To ensure 310 questionnaires were distributed. The return rate was 97% (n=301). All data processing and statistical analysis was performed using the software SPSS 19. For analysis data, correlative coefficients and factor analysis were used.

RESULTS

A. Demographic profile: Table 1 shows the demographic profile and descriptive statistics. The results of descriptive statistics indicated that the majority of farmers were men (97.3%); the majorities of farmers were 37-51 years old (60.8%) and had diploma degree status (31.9%).

Table 1. Demographic Characteristics of Summer Crop Farmers.

Age	f	%	
22-36	82	27.2	Mean = 41
37-51	183	60.8	SD = 8.14
52-66	19	6.3	Min = 22
67-80	2	0.7	Max = 80
No answer	15	5	
Total	301	100	
Level of Education			
Illiterate	30	10	
Elementary	25	8.3	
Guidance school	58	19.3	
High school	53	17.6	
Diploma	96	31.9	
Higher than diploma	35	11.6	
No answer	4	1.3	
Total	301	100	
Income (Million Rials)			
10-100	105	34.9	Mean=224
101-400	148	49.2	Min=10
401-700	42	14	Max=900
701-900	6	2	
Total	301	100	

Also the majority of them had income between 101-400 million rials in year (49.2%). The mean of income was 224 million rials in year.

B. Factor analysis of items affecting marketing management: To categorize factors affecting marketing management, and to determine the variance explained by each factor, an exploratory factor analysis approach was followed. Data revealed that internal coherence of the data was appropriate (KMO = 0.916), while and the Bartlett's statistic was significant at the 0.01 level (7526.7). The four commonly used decision rules were applied to identify the factors (Hair et al, 2005): 1) minimum eigenvalue of 1; 2) minimum factor loading of 0.5 for each indicator item; 3) simplicity of factor structure; and 4) exclusion of single item factors. According to Kaiser Criteria, there were seven factors that their extracted eigenvalues were greater than one. Later, the items were categorized into seven factors by using VARIMAX Rotation Method (Table 2).

Table 2: Percent of explained variance by factors underling marketing management.

Factors	Eigenvalues	Percent	Cum percent
Factor 1	13.146	38.664	38.664
Factor 2	4.033	11.862	50.526
Factor 3	1.839	5.410	55.936
Factor 4	1.569	4.616	60.552
Factor 5	1.203	3.539	64.091
Factor 6	1.114	3.277	67.368
Factor 7	1.021	3.004	70.372

Table 3: Rotated component matrix for the affecting factors on marketing management.

Factors	Component	Factor Loadings for Components
Supportive factor	Control the prices of products by the government.	0.863
	Providing the facilities and equipment	0.743
	Monitoring the market	0.726
	Monitoring of imports of products	0.573
	Support local cooperatives	0.486
Infrastructure factor	Exports of agricultural products	0.830
	Information systems active in the field marketing	0.697
	Infrastructure facilities (cold storage, packaging, processing, etc.)	0.662
	Development of investment companies	0.648
	Equip fruit and vegetable markets	0.613
Technical factor	Considering the principles of sustainable agriculture	0.791
	Increase in crop yield	0.661
	Familiarize farmers with proper storage	0.658
	Being familiar with the pricing of products	0.637
	Improved packaging	0.545
	Support the change in cropping pattern	0.467
Economical factor	Improve subsidizing inputs	0.877
	Improvement in consumer subsidies	0.766
	Crop insurance	0.826
	Facilities for packaging	0.470
Information and communication factor	Distribution of educational publications (catalogs, brochures, etc.)	0.833
	Radio and TV programs	0.774
	Access to market information via mobile phone	0.623
	Internet access	0.602
	Dissemination of market information by SMS	0.527
Extension and educational factor	Participating in educational programs	0.832
	The use of technical advice	0.825
	The meeting with agricultural extension workers	0.768
	Communicate with facilitator	0.746
	Establishment of demonstration farms	0.622
	Associated with consulting firms	0.424
Participational factor	Involving farmers in matters about marketing	0.693
	Participate in cooperative marketing	0.677
	Development of local organizations in the field of marketing	0.638
	Support from local organizations	0.486

Based on the results of factor analysis the factors were categorized into seven main components, which have been named supportive factor, infrastructure factor, technical factor, economical factor, information and communication factor, extension and educational factor and participational factor (Table 3). The obtained results from the factor analysis revealed that the seven mentioned factors explained 70.372% of the variation of affecting factors on marketing management. The first group which is labeled supportive factor, had the most eigenvalue (13.146). Also, this factor explained 38.664% of the total variances of the variables. The second group, labeled infrastructure factor, is comprised of five items. This factor with Eigen value 4.033 explained 11.862% of the total variances of the variables (Table 3).

CONCLUSION

Based on the results of factor analysis the factors were categorized into seven main components, which have been named supportive factor, infrastructure factor, technical factor, economical factor, information and communication factor, extension and educational factor and participational factor. The obtained results from the factor analysis revealed that the seven mentioned factors explained 70.372% of the variation of affecting factors on marketing management. Thus, the policy makers must be considering the items of these factors. These items include:

Supportive factor:
-Control the prices of products by the government.
-Providing the facilities and equipment
-Monitoring the market
-Monitoring of imports of products
-Support local cooperatives

Infrastructure factor:
-Exports of agricultural products
-Information systems active in the field marketing
-Infrastructure facilities (cold storage, packaging, processing, etc.)
-Development of investment companies
-Equip fruit and vegetable markets

Technical factor:
-Considering the principles of sustainable agriculture
-Increase in crop yield
-Familiarize farmers with proper storage
-Being familiar with the pricing of products
-Improved packaging
-Support the change in cropping pattern

Economical factor:
-Improve subsidizing inputs
-Improvement in consumer subsidies
-Crop insurance
-Facilities for packaging

Information and communication factor:
-Distribution of educational publications (catalogs, brochures, etc.)
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Extension and educational factor:
-Participating in educational programs
-The use of technical advice
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-Establishment of demonstration farms
-Associated with consulting firms

Participational factor:
-Involving farmers in matters about marketing
-Participate in cooperative marketing
-Development of local organizations in the field of marketing
-Support from local organizations

ACKNOWLEDGMENT

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